

Amendments to the Drawings:

There are no amendments to the drawings.

REMARKS/ARGUMENTS

Claims pending in this application are Claims 1-10. Claim 1 has been amended to clarify claimed invention. Accordingly, upon entry of these amendments, Claims 1-10 will be before the Examiner for consideration.

35 U.S.C. § 121 Election/Restriction Requirement

1. Applicant affirms election of Claims 1-10 which are drawn to a method of removing organolead compounds from aqueous compositions during a conversion on 3/15/05 with Examiner Hruskoci. A divisional patent application, Ser. No. 11/086,730, has been filed including unelected Claims 11-20 from the present patent application.

35 U.S.C. § 103(a) Rejections

2. The Examiner had rejected Claims 1-4 and 6-10 under 35 U.S.C. §103(a) as being unpatentable over Collier, et al., (U.S. Pat. No. 3,308,061 hereinafter referred to as the "Collier reference") in view of Otto (U.S. Pat. No. 4,070,282 hereinafter referred to as the "Otto reference"). The Examiner states that it appears that the ozone contacting step of Collier would produce insoluble lead oxide polymers in the precipitate. Examiner admits that the applicant's claims differ from Collier by reciting that the aqueous composition is contacted through activated carbon to remove the polymers. The Examiner also states that in Otto it is known in the art to remove organolead compounds from an aqueous composition, by passing the aqueous composition through a bed of activated carbon. The Examiner states that it would have been obvious for one having ordinary skill in the art at the time the invention was made to modify the method of Collier by contacting the aqueous composition through activated carbon in view of Otto, to aid in removing organolead and lead oxide polymers from the aqueous composition. And that specific ozonating time, organolead reduction, and ozone exposure utilized, would have been an obvious matter of process optimization to one skilled in the art, depending on the specific aqueous composition treated and results desired, absent a sufficient showing of unexpected results. Applicant respectfully traverses.

Combining the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966) and later endorsed by *In re Oetiker*, 977 F.2d 1443, 24 USPQ

2d 1443 (Fed. Cir. 1992), indicates that a prima facie case of obviousness is established when the Examiner provides the following elements:

1. One or more references
2. that were available to the inventor and
3. that teach
4. a suggestion or combine or modify the references,
5. the combination or modification of which would appear to be sufficient to have made the claimed invention obvious to one of ordinary skill in the art.

Accordingly, an applicant who is able to prove that the Examiner has failed to establish any one of these elements should prevent the prima facie case of obviousness from being established. The Federal Circuit has endorsed this view in *In re Oetiker*, stating that “[i]f the examination at the initial stage does not produce a prima facie case of unpatentability, then without more the [A]pplicants are entitled to grant of the patent.”

The fourth element requires some reason, suggestion, or motivation from the prior art as a whole for the person of ordinary skill to have combined or modified the references. [O]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion ...supporting the combination”. (see *In re Geiger*, 815 F.2d 686, 2 USPQ 2d 1276, 1278 (Fed. Cir. 1987)). The mere fact that the prior art may be modified in the manner suggested by the Examiner it does not make the modification obvious unless the prior art suggested the desirability of the modification. The Applicant recognizes that one can theoretically explain the technological rationale for the claimed invention using selected teachings from the references cited by the Examiner; however, this approach has been criticized by our reviewing courts as hindsight construction. (see *In re Fine*, 837 F.2d at 1075, 5 USPQ 2d at 1600). Applicant respectfully believes that the Office Action is relying on hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious. One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

First, neither the Collier or Otto references cited by Examiner teach or suggest the use of Applicant’s molecular filtration process. Applicant’s present invention clearly

claims a filtration process as shown in Claim 1. The Examiner stated in the office action that it “appears” that the ozone contacting step of Collier would produce insoluble lead oxide polymers in the precipitate. However, Applicant believes that the ozone contacting step in Collier is very different than Applicant’s present invention.

Applicant’s present invention targets tetraalkyllead compounds via ozonolysis giving insoluble lead oxide polymers (or at least insoluble lead containing materials)(without pretreating the organolead composition to alter its pH to 8.0-9.5), which is removed by filtration to yield a filtrate in which the soluble lead remaining is significantly reduced. In the Collier reference pretreatment to adjust pH to 8.0 to 9.5 pH of effluent is taught and claimed before ozonolysis. The Collier reference specifically mentions the treatment of trialkyllead halide or hydroxide compounds in water (see column 3 lines 44-52). Even in example 3(also see examples 1-3, see column 4, lines 34-75 and column 5, lines 1-14) where tetraalkyllead compounds is mentioned the pH is adjusted with NaOH producing trialkyllead hydroxide species prior to ozonolysis. This is substantially different from treating tetraalkyllead compounds directly with ozone. The present method requires no pretreatment such as adjusting the pH (8-9.5 pH) prior to ozonolysis. Although the “amount” of organoleads reduced in an organolead composition can vary depending on pH of the initial organolead composition, organoleads are successfully removed in Applicant’s present invention without adjusting pH, therefore pretreatment of the organolead composition prior to ozonolysis in Applicant’s invention is not required. Applicant has amended Claim 1 to include the term “directly” oxidized to eliminate the possibility of the step of pretreatment to alter pH. Support for amendment to Claim 1 is the processes utilized in the given examples in Applicant’s specification.

Furthermore, the Collier reference also mentions that enough CO₂ is present in the gas mixture (air) to precipitate the lead containing materials as carbonates. The present method uses oxygen as the gas source and as such will contain much lower concentrations of CO₂. This suggests that under these conditions a different type of precipitate may form. Moreover, the Otto reference is based on the removal of R₃Pb⁺X⁻ so a similar argument to the above applies in that the lead must be in ionizable form before removal.

The Federal Circuit has endorsed this view in *In re Oetiker*, stating that “[i]f the examination at the initial stage does not produce a prima facie case of unpatentability, then without more the [A]pplicants are entitled to grant of the patent.” As a result, Applicant believes that the office action has not established a prima facie case of obviousness because the fourth element has not been met, which requires some reason, suggestion, or motivation from the prior art as a whole for the person of ordinary skill to have combined or modified the references. Applicant believes that none of the references alone or combined (Collier, and Otto references) teach nor suggest the entire claimed invention of the Applicant which is a “method for removing (non-ionized) organolead compounds from aqueous compositions undergoing direct ozonolysis without pretreatment of composition’s pH, contacting with non-ionizing activated carbon, and filtration.” In light of newly amended Claim 1, reconsideration and withdrawal of this ground for this 103(a) rejection is respectfully requested.

3. The Examiner had rejected Claims 5 under 35 U.S.C. §103(a) as being unpatentable over Collier in view of Otto, and further in view of Holler (U.S. Pat. No. 5,082,568 hereinafter referred to as the “Holler reference”). The Examiner states that the Holler reference discloses that it is known in the art to remove lead compounds from water through a filter module having a porosity within the applicant’s cited range. Examiner states that it would have been obvious to one skilled in the art to modify the references as applied above by utilizing the cited filtering means in view of the teachings of Holler, to aid in removing lead compounds from the aqueous composition and that the specific porosity utilized would have been obvious matter of process optimization to one skilled in the art, depending on the specific aqueous composition treated and results desired, absent a sufficient showing of unexpected results. Applicant respectfully traverses.

Applicant uses same argument used in the above 103(a) rejection of Claims 1-4 and 5-10 in addition to the argument below for the 103(a) rejection of Claim 5. In addition, the Holler reference does not teach or suggest the use of filtration with ozonolysis. Instead, the Holler reference can be argued against in the same way as ion exchange is specifically mentioned requiring that the Pb^{+} be in some ionic rather than

molecular form. Anyone skilled in the art would know that ionic filtration is completely different from molecular filtration and therefore it would not be obvious from one skilled in the art to combine the ionic filtration process of Holler, because a molecular filtration process is utilized in Applicant's method. Claim 1 has been amended to include the terms "molecular" filtering and "non-ionizing" activated carbon. Support for amendment to Claim 1 is the filtering means utilized in the given example in Applicant's specification.

In conclusion, none of the references alone or in combination teach, suggest, or combine Applicant's method using direct (non-pretreated) ozonating process, non-ionic activated carbon and filtration process. Furthermore, the Collier and Otto reference does not teach, suggest, or modify its ozonating step (like Applicant's) with the Applicant's non-ionizing filtration and activated carbon processes, vice versa, the Holler reference does not teach or suggest to combine its ionic filtration process to a molecular filtration process with a direct ozonating process and non-ionic filtration process.

In light of newly amended Claim 1, reconsideration and withdrawal of this ground for both 103(a) rejections are respectfully requested.

The Commissioner is authorized to charge any fees associated with filing of this response to Deposit Account No. 50-0931.

Applicant submits that all grounds for rejection of claims presented herein have been addressed and amended as such. Accordingly, Claims 1-10 will be before the Examiner for prosecution on the merits.

Applicant invites the Examiner to call the undersigned if clarification is needed on any aspect of this response, or if the examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read 'Charlene', written over a horizontal line.

CHARLENE A. HALEY

Attorney for Applicant

Registration No. 52,983

Navy Case No. 83197

NAWCWD

Office of Counsel, Code K00000D

1 Administration Circle, STOP 1009

China Lake, CA 93555-6100

Telephone: (760) 939-4177

Facsimile: (760) 939-0679